

Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

Claim 1 (canceled).

2. (currently amended) A method of processing image information, comprising the steps of:

encoding said image information by a bit plane;

generating, by an image processing apparatus, an index parameter indexing degradation of said image information caused by truncation of one or more bit planes based on said image information;

compressing, by the image processing apparatus, said image information by truncating the bit planes determined based on said index parameter; and

counting a number of most significant bits of each bit plane of said image information before encoding;

wherein said index parameter is said number of most significant bits of each bit plane.

3. (previously presented) The method as claimed in claim 2, further comprising the step of predicting distortion of said image information caused by the truncation of the bit planes based on said number of most significant bits of each bit plane, wherein said index parameter contains the predicted distortion.

4. (previously presented) The method as claimed in claim 3, further comprising the step of predicting a slope parameter of said distortion of said image information caused by the truncation of the bit planes based on said number of most significant bits of each bit plane, wherein said index parameter contains the predicted distortion and the predicted slope parameter.

5. (previously presented) The method as claimed in claim 2, further comprising the step of obtaining an amount of distortion of said image information caused by the truncation of the bit planes based on said image information before encoding, wherein said index parameter contains the obtained amount of distortion.

6. (previously presented) The method as claimed in claim 5, further comprising the step of obtaining a slope parameter of said distortion of said image information caused by the truncation of the bit planes based on said image information before encoding, wherein said index parameter contains the obtained amount of distortion and the obtained slope parameter.

7. (previously presented) The method as claimed in claim 2, wherein said image information is compressed with JPEG 2000.

8. (previously presented) The method as claimed in claim 2, wherein said image information is compressed with JPEG 2000; and the generated index parameter is stored in a comment marker of the encoded image information.

9. (previously presented) The method as claimed in claim 8, wherein said comment

marker is provided in a main header or a tile part header of the encoded image information.

10. (previously presented) An image processing apparatus, comprising:

an encoding unit that encodes image information by a bit plane;

an index generating unit that generates index parameter indexing degradation of said image information caused by truncation of one or more bit planes based on said image information;

a compressing unit that compresses said image information by truncating the bit planes determined based on said index parameter;

a counting unit that counts a number of most significant bits of each bit plane of said image information before encoding, wherein said index parameter contains said number of most significant bits of each bit plane; and

an index attaching unit that attaches said index parameter to the encoded image information;

wherein the bit planes to be truncated are determined based on the attached index parameter.

11. (previously presented) An image processing apparatus, comprising:

an encoding unit that encodes image information by a bit plane;

an index generating unit that generates index parameter indexing degradation of said image information caused by truncation of one or more bit planes based on said image information;

a compressing unit that compresses said image information by truncating the bit planes

determined based on said index parameter; and

a counting unit that counts a number of most significant bits of each bit plane of said image information before encoding;

wherein said index parameter contains said number of most significant bits of each bit plane.

Claim 12 (previously canceled).

13. (previously presented) An image processing apparatus, comprising:

an encoding unit that encodes image information by a bit plane;

an index generating unit that generates index parameter indexing degradation of said image information caused by deletion of one or more portions of said image information;

a compressing unit that compresses said image information by deleting the portions determined based on said index parameter;

a counting unit that counts a number of most significant bits of each bit plane of said image information before encoding, wherein said index parameter contains said number of most significant bits of each bit plane; and

an index attaching unit that attaches said index parameter to the encoded image information;

wherein the portions to be deleted are determined based on said index parameter.

14. (previously presented) A computer readable medium tangibly embodying a program that causes a computer to process image information utilizing a method comprising the steps of:

encoding said image information by a bit plane;
generating index parameter indexing degradation of said image information caused by truncation of one or more bit planes based on said image information;
compressing said image information by truncating the bit planes determined based on said index parameter;
counting a number of most significant bits of each bit plane of said image information before encoding, wherein said index parameter is said number of most significant bits of each bit plane; and
attaching said index parameter to the encoded image information;
wherein the bit planes to be truncated are determined based on the attached index parameter.

15. (currently amended) A method of processing audio information, comprising the steps of:

encoding said audio information by a bit plane;
generating, by an audio processing apparatus, index parameter indexing degradation of said audio information caused by deletion of one or more portions of said audio information;
compressing, by the audio processing apparatus, said audio information by deleting the portions determined based on said index parameter;
counting a number of most significant bits of each bit plane of said ~~[[image]]~~ audio information before encoding, wherein said index parameter is said number of most significant bits of each bit plane; and
attaching said index parameter to the encoded audio information;

wherein the portions to be deleted are determined based on said index parameter.

16. (previously presented) An audio processing apparatus, comprising:

an encoding unit that encodes audio information by a bit plane;

an index generating unit that generates index parameter indexing degradation of said audio information caused by deletion of one or more portions of said audio information;

a compressing unit that compresses said audio information by deleting the portions determined based on said index parameter;

a counting unit that counts a number of most significant bits of each bit plane of said audio information before encoding, wherein said index parameter contains said number of most significant bits of each bit plane; and

an index attaching unit that attaches said index parameter to the encoded audio information;

wherein the portions to be deleted are determined based on said index parameter.

17. (previously presented) A computer readable medium tangibly embodying a program that causes a computer to process audio information utilizing a method comprising the steps of:

encoding said audio information by a bit plane;

generating index parameter indexing degradation of said audio information caused by deletion of one or more portions of said audio information;

compressing said audio information by deleting the portions determined based on said index parameter;

counting a number of most significant bits of each bit plane of said audio

information before encoding, wherein said index parameter contains said number of most significant bits of each bit plane; and

attaching said index parameter to the encoded audio information;

wherein the portions to be deleted are determined based on said index parameter.

18. (previously presented) A computer readable medium tangibly embodying a program that causes a computer to process image information utilizing a method comprising the steps of:

encoding said image information by a bit plane;

generating index parameter indexing degradation of said image information caused by deletion of one or more portions of said image information;

compressing said image information by deleting the portions determined based on said index parameter;

counting a number of most significant bits of each bit plane of said image information before encoding, wherein said index parameter is said number of most significant bits of each bit plane; and

attaching said index parameter to the encoded image information;

wherein the portions to be deleted are determined based on said index parameter.

19. (new) The image processing apparatus as claimed in claim 11, further comprising:

a distortion predicting unit configured to predict distortion of said image information caused by the truncation of the bit planes based on said number of most significant bits of each bit plane,

wherein said index parameter generated by said index generating unit contains the

predicted distortion.

20. (new) The image processing apparatus as claimed in claim 11, further comprising:

a slope parameter predicting unit configured to predict a slope parameter of said distortion of said image information caused by the truncation of the bit planes based on said number of most significant bits of each bit plane,

wherein said index parameter generated by said index generating unit contains the predicted distortion and the predicted slope parameter.

21. (new) The computer readable medium as claimed in claim 14, wherein said method further comprises predicting distortion of said image information caused by the truncation of the bit planes based on said number of most significant bits of each bit plane, wherein said index parameter contains the predicted distortion.

22. (new) The computer readable medium as claimed in claim 14, wherein said method further comprises a slope parameter of said distortion of said image information caused by the truncation of the bit planes based on said number of most significant bits of each bit plane, wherein said index parameter contains the predicted distortion and the predicted slope parameter.